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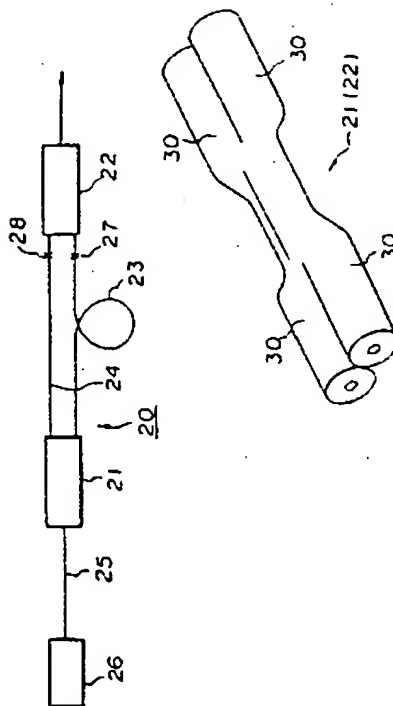
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APPLICANT : NIPPON TELEGR & TELEPH CORP
<NTT>;

INVENTOR : NODA JUICHI;

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TITLE : POLARIZED WAVE DISSOLVING
DEVICE



ABSTRACT : PURPOSE: To shorten the length of a stationary polarized wave optical fiber to be used as a whole, by setting the length of a delay part fiber so as to be longer than the coherent length, and shortening the length of the other delay part fiber, with respect to an optical path difference between two pieces of delay part fibers.

CONSTITUTION: A polarized wave dissolving device 20 is constituted of a pair of stationary polarized wave optical fiber branching device 21 and a coupler 22, a pair of delay part fibers 23, 24 consisting of a stationary polarized wave optical fiber 30 provided between them, and a light leading fiber 25 provided between the branching device 21 and an optical axis 26. In this state, each length of these delay part fibers is formed so that an optical path difference between a pair of delay part fibers 23, 24 corresponds to the coherent length or longer of a laser light, etc., and also, a pair of delay part fibers thereof are connected to the coupler 22 in a state that its polarized wave directions are shifted by 90° from each other. In such a way, by making the length of one delay part fiber as short as possible, the length of the stationary polarized wave optical fiber to be used can be shortened as a whole, and also, the device can be constituted by a welded connection which scarcely causes a connection loss.

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